

Principles for Defending your Core from Invasive Annual Grasses



UNIVERSITY
OF WYOMING

IMAGINE



ACT
PROACTIVELY



LEVERAGE
ECOLOGY



CONSIDER
LANDSCAPE
CONTEXT



WORK
TOGETHER



STAY
COMMITTED



Act Proactively

Act. Take action. Do not remain complacent because you've heard nothing can be done to manage invasive annual grasses. Acting proactively doesn't mean only working in areas completely free of invasive grasses. It means focusing on opportunities to impede or reverse the progress of invasion and the associated loss of ecosystem goods and services. Find leverage points where a small amount of effort may result in big results (for example – a single herbicide application to ventenata growing among competitive grasses resulting in 6 years of ventenata control). Prevent introductions into noninvaded core by limiting seed dispersal and by actively reducing annual grass source populations. Aggressively manage new populations when they are found in core areas with high susceptibility to further invasion (strategic Early Detection and Rapid Response (EDRR)). Prevent invaded plant communities from crossing an ecological threshold where annual grasses cause changes in an ecosystem (act as a “driver”) instead of responding to changes in an ecosystem like mismanaged grazing or wildfire (act as a “passenger”) through active invasive grass control and reducing potential changes to the predominant disturbance regime.





Leverage Ecology



Considering how invasive annual grasses grow, reproduce, and interact with their environment allows us to devise strategies targeted at vulnerable life stages and tailored to specific situations. Breaking the cycle of seed production, reducing continual ‘deposits’ of new seeds into the seed bank, and depleting existing viable seeds from the soil are all critical concepts for long-term reduction in annual grass populations. Do not simply focus on controlling annual grasses without considering desired vegetation. Managing ecologically includes focusing on actions that maintain or enhance desired vegetation, thereby increasing site resiliency and capitalizing on existing recovery potential. Linking invasion processes and ecological theory to a landscape context identifies potential risks and opportunities for proactive management that may prevent altered ecosystem function.



Consider Landscape Context



Understanding the distribution of invasive annual grass patches relative to other areas with important habitat characteristics allows us to develop a spatially explicit plan to reduce further loss of high-quality rangelands while reducing impacts of invasive annual grasses. “Scan the invasion horizon” for threats and opportunities. As problem solvers, we often focus on the most impacted areas because they need to be improved. The “defend and grow your core” philosophy encourages us to consider defending or conserving areas with minimal invasive grass impacts. Think about how and where invasion processes such as propagule pressure, source populations, and ecological thresholds are operating in your area and in surrounding areas. By examining the surrounding areas, it can help us to determine where our management fits within the larger landscape. Plan for every acre in your management area.

Work Together



Teamwork is critical because invasion occurs at large scale and requires management actions that operate at large scale and across jurisdictional boundaries. To manage considering landscape context, we must develop that context — acquiring and sharing information beyond our specific ranch, management unit, or field office. Working together diversifies knowledge and experience, brings new ideas to the discussion, and provides the chance to pool complementary skills and resources. A single ranch management team can likely devise and implement a very good plan for that ranch, whereas a diverse team including multiple landowners, agency personnel, scientists, and others may be needed on large-scale projects encompassing multiple land ownerships.





Stay Committed

Invasive annual grass management is not a short-term activity, so do not expect one-time actions to “solve the problem.” As with many collaborative efforts, energy and engagement may start high when things are new, but it takes intentional effort to maintain a partnership over time. Consider taking steps to maintain group focus and engagement such as developing a clear mission statement or written strategy, celebrating successes, and including new members in decision making. Team members may change through time, so having clearly written and regularly-updated plans can help bring new members up to speed quickly. Annual grasses have tremendous population growth potential, so walking away from a short-term success may quickly lead to reinvasion.



defend YOUR CORE

This set of principles was developed by the Invasive Annual Grasses Tech Transfer Partnership, consisting of members from the agencies and institutions shown below. Strategic management of invasive annual grasses is inherently site- and situation-specific, so rather than prescribing a set of actions and recommendations, we articulated a core set of principles intended to encourage land managers to consider how to build a program focused on proactive management at meaningful scales. Western rangelands need strategic action, and the partnership's intent is to empower land managers to succeed in their efforts. For more information, please visit www.invasivegrasses.com.

